

July 29, 2015

Ex Parte

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions; Amendment of Part 15 of the Commission's Rules for Unlicensed Operations in the Television Bands, Repurposed 600 MHz Band, 600 MHz Guard Bands and Duplex Gap, and Channel 37, and Amendment of Part 74 of the Commission's Rules for Low Power Auxiliary Stations in the Repurposed 600 MHz Band and 600 MHz Duplex Gap, Amendment of Parts 15, 73 and 74 of the Commission's Rules to Provide for the Preservation of One Vacant Channel in the UHF Television Band For Use By White Space Devices and Wireless Microphones, GN Docket No. 12-268, ET Docket No. 14-165, MB Docket No. 15-146

Dear Ms. Dortch:

On July 27, 2015, Michael Daum and Scott Blue of Microsoft Corporation, along with Paul Caritj and the undersigned of Harris, Wiltshire & Grannis LLP, met separately with David Strickland, Legal Advisor to Commissioner Clyburn; Jessica Almond, Legal Advisor to Chairman Wheeler; Brendan Carr, Legal Advisor to Commissioner Pai; and Jennifer McGrath, Legal Advisor to Commissioner O'Reilly. We also met with members of the Incentive Auction Task Force: Julius Knapp, Chief, OET; Gary Epstein, Chair, IATF; Howard Symons, Vice Chair, IATF; David Konczal, Office of General Counsel; Serey Thai, OET; Hugh Van Tuyl, OET; Paul Murray, OET; Matthew Hussey, OET; Ira Keltz, OET; Chris Helzer, WTB; Paul Malmud, WTB; and Janet Young, WTB. In addition, on July 28, 2015, we (other than Scott Blue) met with Valery Galasso, Policy Advisor to Commissioner Rosenworcel. In these meetings we discussed the challenges facing the Commission as it considers the best path forward in highly impaired markets.

Microsoft related in each of these meetings that device and chipmakers have said that at least three usable channels must generally be available in every market in order for mass-market personal/portable white space devices to support investment. This is because they believe consumers will not be interested in devices that cannot operate in all markets. Microsoft indicated that, from its perspective, the Commission has great flexibility in which three channels it makes available in any given market—it is important only that three channels be available.

Microsoft also indicated that the situation in Los Angeles is of particular concern. In Los Angeles, due to public safety operations in the T-Band and the corresponding 131 km exclusion zones for adjacent channel operations of white space devices under 47 C.F.R. 15.712 (d),

personal/portable white space devices may not be able to operate on channels 14 through 21 in the most populated parts of the Partial Economic Area. Microsoft noted that channel 21 is currently the lower of two designated wireless microphone channels and may become an attractive channel to leave vacant for use by white space devices. However, Microsoft urged the Commission not to select this or the other channels from 14 to 21 as the vacant channel in the Los Angeles area, since the co-channel and adjacent-channel exclusion zones surrounding nearby public safety operations appear to preclude unlicensed operations in these channels across much of that market.

Microsoft also described its analysis of the full-power and Class A television stations in the Los Angeles market using the Commission's online TV Query tool. Based on this analysis, given the uncertainty of the outcome of the incentive auction, and recognizing that there is an open proceeding related to channel preservation, Microsoft raised concerns that if the Commission chose to place a broadcaster in the duplex gap, the only spectrum assured for personal/portable white space devices in Los Angeles may be channel 37—and that channel, of course, will have numerous exclusion zones to protect WMTS operations. This means that white space devices could not reliably be used in much of the Los Angeles area.

Microsoft also noted that Los Angeles is the second largest urban market in the United States, and if white space devices cannot operate in much of that market, it could undermine marketing efforts for white-space technologies. And that risk could well drive away the investment needed to make commercial white space devices.

Finally, Microsoft discussed the important role of the Commission's Part 15 rules in fostering a vibrant white-space ecosystem. As Microsoft explained, the Commission should adopt a flexible standard for location accuracy that accommodates differing degrees of accuracy by correspondingly reducing or enlarging the applicable separation distances through the white-spaces database. This will allow manufacturers to produce white space devices at lower prices than would be possible under a strict 50 meter accuracy requirement, with no impact on interference protection for other services. In addition, Microsoft discussed the clear record support for rules that would allow white space devices to operate in the duplex gap at power levels of at least 40 mW. In fact, the record indicates that they could do so at significantly higher power levels without causing harmful interference to LTE downlink. The ability for personal/portable devices to operate in the duplex gap at 40 mW is essential to ensure that white space consumers are able to make productive use of this channel. In addition, the Commission should further maximize the value of this spectrum by adopting a "4-6-1" band plan for the duplex gap, using the 1 MHz buffer at the top of the band to minimize interference in the unlicensed channel from LTE uplink.

Microsoft appreciates the Commission's continued support of unlicensed technologies across multiple spectrum bands. We recognize the series of difficult choices facing the Commission related to the Incentive Auction and related items. We also recognize the particular challenges associated with the Los Angeles market. Nevertheless, as Microsoft has consistently maintained, three usable channels for white space devices are required in every U.S. market to be sure to stimulate investment in an ecosystem for personal/portable devices.

Sincerely,

A handwritten signature in black ink that reads "SCOTT HARRIS". The signature is written in a cursive, slightly slanted style.

Scott Blake Harris
Counsel for Microsoft Corporation

Encl.

cc: meeting participants